for example, with a CCD (charge coupled device) camera, detects a state of fluctuation in the interference fringes formed in a detection area separate from the exposure/recording area of the hologram recording medium 4, at a precision of the wavelength order of the laser beam L1 emitted from the laser source 21.

If a state of fluctuation in the interference fringes in excess of a predetermined value is detected in its detection area, the interference fringe detector 33 sends a detection signal to the control computer 13. In response to this detection signal, the control computer 13 immobilizes the shutter mechanism 22. Thereby, because of the interruption of the object light L2 and the reference light L3 to the hologram recording medium 4, generation of the holographic stereogram thereon is stopped. Further, if the state of fluctuation in the interference fringes detected in its detection area is within the predetermined value, the interference fringe detector 33 stops to send its detection signal to the control computer 13. Thereby, the control computer 13 mobilizes the shutter mechanism 22 to allow for the object light L2 and the reference light L3 to fall on the hologram recording medium 4 so as to form the holographic stereogram thereon.

As described hereinabove, by provision of the interference fringe detector 33, the holographic stereogram producing device 10 ensures for the interference fringes due to the interaction between the object light L2 and the reference light L3 to be stabilized and allow for a stable holographic stereogram to be exposed and recorded on the hologram recording

medium 4, thus providing a bright and clear holographic stereogram with an improved refraction efficiency. Still further, by the provision of the interference fringe detector 33, the holographic stereogram producing device 10 may be installed in any place without being limited in its site of location, and substantially improving ease of use.

The above-mentioned interference fringe detector 33 has been described by way of example that it is disposed in proximity to the hologram recording medium 4, and arranged to detect part of the interference fringes formed in its detection area, however, it is not limited thereto. The interference fringe detector 33 may be constructed also such that parts of the object light L2 and the reference light L3 are guided to other positions using, for example, a mirror or the like to form interference fringes which are to be detected. Further, the interference fringe detection device 33 may be arranged also in such a manner that interference fringes are formed from another object light L2 and another reference light L3 which are split using such as a half-mirror or the like, and used for the purpose of detection of the fluctuation in the interference fringes. Still further, the interference fringe detection device 33 may be arranged such that a part of the laser beam L1 emitted from the laser source 21 is directly taken out to form interference fringes for use of detection of vibration. Still more, the interference fringe detection device 33 may also be constructed such that an optical system dedicated for use of detection of vibration is provided separate from the optical system 15, and vibration is

detected through detection of fluctuation in the interference fringes.

The holographic stereogram producing device 10 is further provided with the recording medium feeder device 34 for feeding the hologram recording medium 4 in a direction of arrow "a" in FIG. 2, intermittently per one element hologram portion.

The recording medium feeder device 34 drives to feed in the hologram recording medium 4 intermittently in response to the drive signal C2 sent from the control computer 13. Further, the holographic stereogram producing device 10 operates the shutter mechanism 22 to release open the optical path of the laser beam L1 in synchronism with the operation of the recording medium feeder device 34 and in response to a control signal C1 sent from the control computer 13.

The holographic stereogram producing device 10 described hereinabove is constructed by mounting the components and parts of the above-mentioned optical system 15 on the support plate 18 made of an aluminum plate, aluminum alloy plate or the like as shown in FIG. 1. If a vibration or the like is applied from outside to this holographic stereogram producing device 10, there arises the problem as described above that because the object light L2 and the reference light L3 cannot be supplied stably to the hologram recording medium 4, stable and high-precision interference fringes cannot be exposed and recorded on this hologram recording medium 4. Therefore, in order to suppress such adverse effects on the optical system 15 and so on due to vibration or the like, the support plate 18 of the holographic stereogram